

Claims

- [c1] 1.A system of providing rerun programming to consumers comprising:
means for providing a plurality of consumers with a list of live television programs which are available to said plurality of consumers;
means for monitoring which programs in said list of live television programs are being watched by said plurality of consumers, said means for monitoring further for generating a ranking of programs on said list of live television programs based upon a popularity characteristic of said programs on said list;
means for recording at least a portion of said programs on said list of live television programs;
means for electronic delivery of rerun programs to said plurality of consumers in a manner of program delivery which is other than real time delivery of programming which is capable of being viewed by a television set in real time; and,
wherein at least one of said means for recording and said means for electronic delivery is operationally responsive to said ranking of programs.
- [c2] 2.A system of claim 1 wherein said manner of program delivery is via digital side channels of a terrestrially broadcast digital television signal.
- [c3] 3.A system of claim 2 wherein said means for providing a plurality of consumers with a list of live television programs which are available to said plurality of consumers further includes a means for providing a plurality of rerun programming choices to a plurality of consumers.
- [c4] 4.A system of claim 3 wherein said means for recording is operatively responsive to said ranking of programs; and said means for recording is automated such that when a ranking of any particular program exceeds a threshold, it is recorded.
- [c5] 5.A system of claim 4 wherein said threshold is dependent upon a lowest ranking of a group of programs previously recorded.

- [c6] 6.A system of claim 2 wherein said means for electronic delivery transmits said rerun programs at variable speeds, depending at least in part upon whether a live broadcast television signal is being transmitted in HDTV format.
- [c7] 7.A system of claim 6 wherein said variable speeds include other than real time transmission rates.
- [c8] 8.A system of claim 7 wherein said other than real time transmission rates include non-continuous transmissions of a single program is said rerun programs.
- [c9] 9.A system of claim 7 wherein said other than real time transmission rates includes a transmission rate which is faster than real time when said live broadcast television signal is being transmitted in other than HDTV format.
- [c10] 10.A system of claim 7 wherein said other than real time transmission rates include a transmission rate which is slower than real time when said live broadcast television signal is being transmitted in HDTV format and one of said rerun programs is in HDTV format.
- [c11] 11.A system of claim 10 wherein said transmission rate which is slower than real time is non-continuous.
- [c12] 12.A system of claim 2 wherein said means for providing is an electronic program guide on an Internet website having record commanding links therein.
- [c13] 13.A system of claim 12 wherein said programming guide is downloaded by a personal computer, which is adapted and configured to receive, store and display digital television programming.
- [c14] 14.A system of claim 13 wherein a viewer's selection of a program to be recorded is not communicated over the Internet, but used by an applet associated with the programming guide after being downloaded, to said personal computer.

[c15]

15.A system of claim 11:

wherein said means for providing is an electronic program guide on an Internet website having record commanding links therein;

wherein said programming guide is downloaded by a personal computer, which is adapted and configured to receive, store and display digital television programming; and,

wherein a viewer's selection of a program to be recorded is not communicated over the internet, but used by an applet associated with the programming guide after being downloaded, to said personal computer.

[c16]

16.A system for providing rerun programming to consumers comprising:

a source of digital television programming signals;

said source of digital television programming signals simultaneously transmitting a plurality of distinct signals for different television programs, including a first signal which is a real time digital video signal and a second signal which is an other than real time digital video signal;

a personal computer (PC), being configured to tune digital television programming signals;

said PC being configured to record digital television programs as digital data files;

said PC further being configured to capture said digital television programming signals, at a transmission rate which is at a transmission rate other than a transmission rate for real time viewing of television programming;

said transmission rate is at a higher than real time rate when said source of digital television programming is broadcasting other programming in a non-high definition television format and said transmission rate is lower than real time when said source of digital television programming is broadcasting other programming in a high definition television format;

said PC further being configured to record said digital television programming signals which have been captured at rates other than a rate for real time viewing of television programming; and,

said PC further being configured to visually present to a viewer for viewing at a real time viewing rate, recorded digital programs which have been previously received by said PC as digital television programming signals at transmission rates other than a transmission rate for real time viewing of television programming.

- [c17] 17.A system of claim 16 wherein said source of digital television programming is an over-the-air broadcast television station.
- [c18] 18.A system of claim 17 wherein said source of digital television signals is operating under a broadcasting license from a governmental agency regulating television broadcasting.
- [c19] 19.A system of claim 17 wherein said PC is configured to capture said digital signals via one of: cable, over the air, and satellite.
- [c20] 20.A system of claim 17 wherein said source of digital television programming signals maintains a recording of programming provided via said first signal and provides to said PC via said second signal, selected portions of said programming provided via said first signal.
- [c21] 21.A system of claim 20 where said source of digital television programming signals is responsive to viewer ratings of programming provided via said first signal, so that said selected portions of said programming have a higher popularity rating compared with non-selected portions of said programming provided via said first signal.
- [c22] 22.A system of claim 21 wherein said viewer ratings are provided to said source of digital television programming signals from an external source.
- [c23] 23.A system of claim 21 wherein said viewer ratings are generated by said source of digital television programming signals in response to user interaction with an electronic program guide displayed on said PC and a plurality of geographically distributed and independently owned and operated PCs.

- [c24] 24.A system of claim 23 wherein said viewer ratings are representative of user program recording requests via said electronic program guide displayed on said PC and a said plurality of geographically distributed and independently owned and operated PCs.
- [c25] 25.A system of claim 23 wherein said viewer ratings are representative of viewer requests for live programming via an electronic program guide displayed on said PC and a said plurality of geographically distributed and independently owned and operated PCs.
- [c26] 26.A system of claim 21 wherein said source of digital television programming signals further comprises a storage means for locally storing said selected portions.
- [c27] 27.A system of claim 26 wherein said storage means is configured to be responsive to said viewer ratings.
- [c28] 28.A system of claim 27 wherein said storage means is configured to be subject to automatic deletions of programming stored thereon in response to viewer ratings indicating a higher popularity of new programming available for retention in comparison to programming currently stored by said storage means.
- [c29] 29.A system of claim 28 wherein said storage means is responsive to both said viewer ratings and a time characteristic representative of a length of time since a particular portion of programming was originally transmitted via said first signal.
- [c30] 30.A system of claim 29 wherein said storage means is configured to have a bias toward retention of local programming content originating from said source of digital television programming signals.
- [c31] 31.A method of transmitting rerun digital television programming comprising the steps of:
providing a live digital television signal, in a frequency spectrum range

allocated to a station by a governmental agency, which regulates television broadcasting;
storing programming content broadcast by said live digital television signal;
and,
re-transmitting said programming content, on an unused segment of said frequency spectrum, which is not used by a live digital television signal simultaneously broadcast from said station.

- [c32] 32.A method of claim 31 wherein said step of re-transmitting is at a non-real time transmission rate.
- [c33] 33.A method of claim 31 wherein said step of re-transmitting is responsive to a viewer ratings characteristic associated with said programming content.
- [c34] 34.A method of claim 32 wherein said step of re-transmitting is responsive to a viewer ratings characteristic associated with said programming content.
- [c35] 35.A method of claim 34 wherein said step of storing programming content includes a step of determining whether to retain particular older stored programming content based at least in part upon viewer rating characteristics of newer stored programming content.
- [c36] 36.A method of claim 35 wherein said step of re-transmitting is done at a rate less than a real time transmission rate during times when said station is broadcasting a live digital video signal in high definition television format.
- [c37] 37.A method of claim 36 further comprising the step of receiving and thereafter viewing said programming content at a personal computer (PC) separated from said station.
- [c38] 38.A method of claim 37 wherein said viewer rating is responsive to user interaction with an electronic programming guide displayed on said PC.
- [c39] 39.A method of claim 38 further comprising the step of using information representative of user selections of programming on said electronic programming guide to generate said viewer ratings.

[c40] 40.A method of claim 39 wherein said user selections of programming are user requests for live programming.

[c41]

41.A system for over-the-air broadcasting of rerun programming comprising:

an over-the-air broadcasting station, at a first location, configured for transmission of live digital television signals, including high definition television (HDTV) signals and non-HDTV digital television signals;

an electronic program guide server, at a second location, configured to provide, via an Internet connection, an interactive television programming guide to a plurality of geographically dispersed and independently owned and operated personal computers;

said electronic program guide server providing a matrix of programming available to a particular user based upon a location characteristic of said particular user;

said matrix of programming comprising a web page having a plurality of cells therein wherein individual programs are associated with cells in said matrix and links in said plurality of cells are configured to send information to said electronic program guide server regarding users' selections of rerun programming;

said electronic program guide server being configured to provide viewer ratings based upon said users' selections;

said over-the-air broadcasting station, having a storage means, for storing programming content from said transmission of live digital television signals;

said over-the-air broadcasting station further being configured to selectively retain programming in said storage means based upon said viewer ratings;

and,

said over-the-air broadcasting station further being configured to simultaneously provide rerun programming from said storage means, based upon said viewer ratings, where said rerun programming is broadcast over the air on an otherwise open side channel, simultaneous with live digital

television signals; and

wherein said rerun programming is provided at less than real time when said live digital television signals are HDTV signals and at real time or faster than real time when said live digital television signals are non-HDTV signals.

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